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मानक

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Jawaharlal Nehru

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IS 10124-6 (2009): Fabricated PVC-U Fittings for Potable Water Supplies - Specification, Part 6: Specific Requirements for Flanged Tail Pieces with Metallic Flanges [CED 50: Plastic Piping System]



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“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

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भारतीय मानक
पेय जल आपूर्ति के लिए सविरंचित
पी वी सी-यू फिटिंगें — विशिष्टि
भाग 6 मैटेलिक फ्लैजों के फ्लैजड टेल पीसों की विशिष्टि अपेक्षाएँ
(दूसरा पुनरीक्षण)

Indian Standard

FABRICATED PVC-U FITTINGS FOR POTABLE WATER
SUPPLIES — SPECIFICATION

**PART 6 SPECIFIC REQUIREMENTS FOR FLANGED TAIL PIECES
WITH METALLIC FLANGES**

(Second Revision)

ICS 23.040.45; 91.140.60

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BUREAU OF INDIAN STANDARDS
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FOREWORD

This Indian Standard (Part 6) (Second Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Plastics Piping Systems Sectional Committee had been approved by the Civil Engineering Division Council.

This standard was first published in 1982 and revised in 1988. In this revision, following modifications have been made:

- a) Sizes and classes of fittings have been aligned with IS 4985 : 2000 'Unplasticized PVC pipes for potable water supplies — Specification'.
- b) Requirements for fabricated PVC flanged tail pieces with metallic flanges for elastomeric sealing ring joints have also been included.

The requirements of fabricated PVC-U fittings are covered in thirteen parts. The other parts in the series are:

- Part 1 General requirements
- Part 2 Specific requirements for sockets
- Part 3 Specific requirements for straight reducers
- Part 4 Specific requirements for caps
- Part 5 Specific requirements for equal tees
- Part 7 Specific requirements for threaded adaptors
- Part 8 Specific requirements for 90° bends
- Part 9 Specific requirements for 60° bends
- Part 10 Specific requirements for 45° bends
- Part 11 Specific requirements for 30° bends
- Part 12 Specific requirements for 22½° bends
- Part 13 Specific requirements for 11¼° bends

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the results of a test or analysis, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

*Indian Standard***FABRICATED PVC-U FITTINGS FOR POTABLE WATER
SUPPLIES — SPECIFICATION****PART 6 SPECIFIC REQUIREMENTS FOR FLANGED TAIL PIECES
WITH METALLIC FLANGES***(Second Revision)***1 SCOPE**

This standard (Part 6) lays down the requirements for manufacture, dimensions and marking for fabricated PVC-U flanged tail pieces with metallic flanges for potable water supplies.

2 REFERENCES

The standards listed below contain provisions which, through reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision and parties to agreement based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below:

<i>IS No.</i>	<i>Title</i>
210 : 1993	Grey iron castings — Specification (<i>fourth revision</i>)
4985 : 2000	Unplasticized PVC pipes for potable water supplies — Specification (<i>third revision</i>)
10124 (Part 1) : 2009	Specification for fabricated PVC-U fittings for potable water supplies — Specification: Part 1 General requirements

3 REQUIREMENTS**3.1 General**

The general requirements for material, sizes, tests, sampling and criteria for conformity shall conform to IS 10124 (Part 1).

3.2 Manufacture

3.2.1 A typical illustration of flanged tail piece is shown in Fig. 1.

3.2.2 Dimensions

The dimensions of flanged tail pieces with metallic flanges shall comply with those given in Table 1 read with Fig. 1. The dimensions for flanged tail pieces with metallic flanges for elastomeric sealing ring joints shall comply with those given in Table 2 read with Fig. 2.

3.2.2.1 The minimum wall thickness of fabricated tail pieces of particular pressure class shall be the same

as the minimum wall thickness of the corresponding pressure class pipe as specified in IS 4985.

NOTE — For 0.25 MPa pressure class, flanged tail pieces should not be made from 0.25 MPa pressure class pipes. For this flanged tail pieces made from 0.4 MPa pressure class should be used.

3.2.2.2 The flanged tail piece may be either plain or socketed as agreed to between the manufacturer and the purchaser. In the case of socketed flanged tail piece, the socket dimensions shall comply with IS 10124 (Part 1).

3.2.3 The suitable material for metallic flanged shall be cast iron and shall be of the quality not less than that specified for Grade FG 150 of IS 210.

4 MARKING

4.1 Each flange tail piece with metallic flange shall be clearly and indelibly marked with the following information:

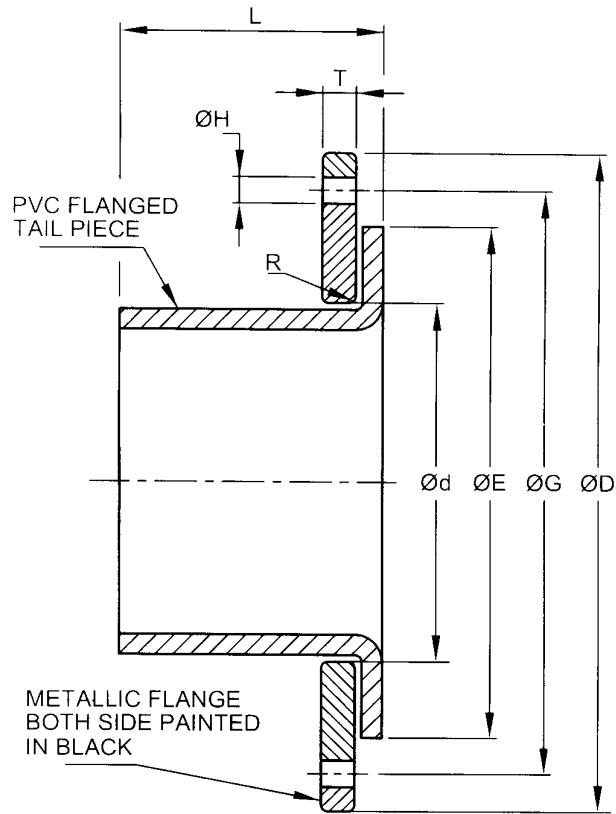
- Manufacture's name or identification mark,
- Size of the flange tail piece with metallic flange and the appropriate class (working pressure) of IS 4985 to which the pressure rating of the fitting corresponds, and
- Flange tail piece with metallic flange shall be marked in colour as indicated below for different classes of fittings:

<i>Class of the Fittings</i>	<i>Colour</i>
Class 2 (0.4 MPa)	Blue
Class 3 (0.6 MPa)	Green
Class 4 (0.8 MPa)	Brown
Class 5 (1.0 MPa)	Yellow
Class 6 (1.25 MPa)	Black

4.2 BIS Certification Marking

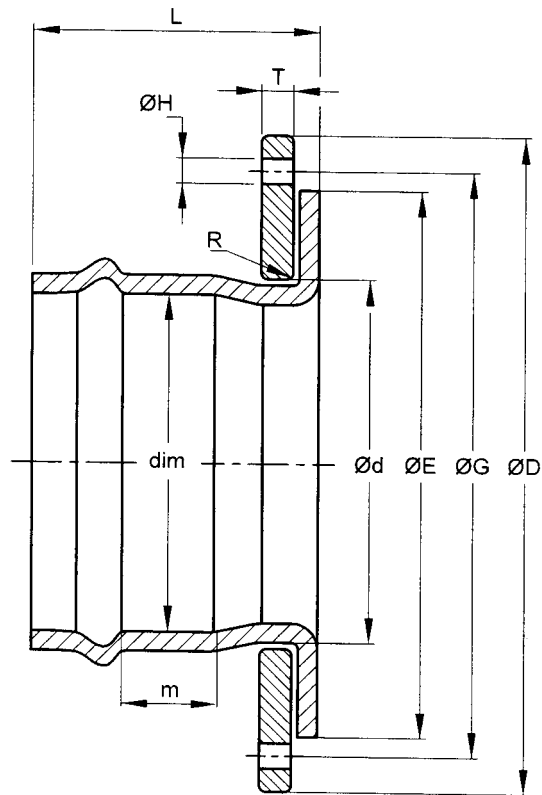
Each flanged tail piece with metallic flange may also be marked with the Standard Mark.

4.2.1 The use of the Standard Mark is governed by the provisions of the *Bureau of Indian Standards Act, 1986* and the Rules and Regulations made thereunder. The details of conditions under which a licence for the use of the Standard Mark may be granted to the manufacturer or producer may be obtained from the Bureau of Indian Standards.



NOTE — This drawing is intended to define the terms used in Table 1 and is not intended to illustrate specific design features.

FIG. 1 PVC FLANGED TAIL PIECE WITH METALLIC FLANGE



NOTE — This drawing is intended to define the terms used in Table 2 and is not intended to illustrate specific design features.

FIG. 2 FLANGED TAIL PIECE WITH METALLIC FLANGE FOR ELASTOMERIC SEALING RING JOINT

Table 1 Dimensions of PVC Flanged Tail Piece with Metallic Flanges*(Clause 3.2.2, and Fig. 1)*

All dimensions in millimetres.

Sl No.	Nominal Size	Dia <i>G</i>	Dia <i>D</i>	Dia <i>d</i>	Dia <i>T</i>	Dia <i>H</i>	No. of Holes	<i>R</i> <i>Min</i>	<i>L</i> <i>Min</i>	Dia <i>E</i> <i>Max</i>	Bolt Size
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
i)	63	125	165	64 ^{+1.0} ₋₀	7.0	19	4	2.5	68	101	M16
ii)	75	145	185	76 ^{+1.0} ₋₀	7.0	19	4	2.5	80	121	M16
iii)	90	160	200	91 ^{+1.0} ₋₀	9.5	19	4	3.0	95	136	M16
iv)	110	180	220	112 ^{+1.0} ₋₀	9.5	19	8	3.0	115	156	M16
v)	125	210	250	127 ^{+1.0} ₋₀	11.0	19	8	3.0	130	186	M16
vi)	140	210	250	142 ^{+1.0} ₋₀	12.5	19	8	4.0	145	186	M16
vii)	160	240	285	162 ^{+1.0} ₋₀	12.5	23	8	4.0	165	212	M20
viii)	180	240	285	183 ^{+1.0} ₋₀	12.5	23	8	4.0	185	212	M20
ix)	200	295	340	203 ^{+1.0} ₋₀	16.0	23	8	4.0	205	267	M20
x)	225	295	340	228 ^{+1.0} ₋₀	20.0	23	8	4.0	230	267	M20
xi)	250	350	395	253 ^{+1.0} ₋₀	20.0	23	12	5.0	255	322	M20
xii)	280	350	395	284 ^{+1.0} ₋₀	20.0	23	12	5.0	285	322	M20
xiii)	315	400	445	319 ^{+1.0} ₋₀	24.5	23	12	5.0	320	372	M20
xiv)	355	460	505	359 ^{+1.0} ₋₀	24.5	23	16	5.0	360	432	M20
xv)	400	515	565	405 ^{+1.0} ₋₀	24.5	28	16	6.0	405	483	M24
xvi)	450	565	615	455 ^{+1.0} ₋₀	28.0	28	16	6.0	455	533	M24
xvii)	500	620	670	506 ^{+1.0} ₋₀	28.0	28	20	6.0	505	588	M24
xviii)	560	685	740	566 ^{+1.0} ₋₀	32.0	33	20	6.0	565	649	M24
xix)	630	755	810	637 ^{+1.0} ₋₀	32.0	33	20	7.0	635	719	M27

Table 2 Dimensions of Flanged Tail Piece with Metallic Flange for Elastomeric Sealing Ring Joint*(Clause 3.2.2, and Fig. 2)*

All dimensions in millimetres.

SI No.	Nominal Size	Dia G	Dia D	Dia d	T	Dia H	No. of Holes	R Min	L Min	Dia E Max	Bolt Size
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
i)	63	125	165	64 ^{+1.0} ₋₀	7.0	19	4	2.5	138	101	M16
ii)	75	145	185	76 ^{+1.0} ₋₀	7.0	19	4	2.5	149	121	M16
iii)	90	160	200	91 ^{+1.0} ₋₀	9.5	19	4	3.0	162	136	M16
iv)	110	180	220	112 ^{+1.0} ₋₀	9.5	19	8	3.0	181	156	M16
v)	125	210	250	127 ^{+1.0} ₋₀	11.0	19	8	3.0	195	186	M16
vi)	140	210	250	142 ^{+1.0} ₋₀	12.5	19	8	4.0	208	186	M16
vii)	160	240	285	162 ^{+1.0} ₋₀	12.5	23	8	4.0	225	212	M20
viii)	180	240	285	183 ^{+1.0} ₋₀	12.5	23	8	4.0	245	212	M20
ix)	200	295	340	203 ^{+1.0} ₋₀	16.0	23	8	4.0	263	267	M20
x)	225	295	340	228 ^{+1.0} ₋₀	20.0	23	8	4.0	287	267	M20
xi)	250	350	395	253 ^{+1.0} ₋₀	20.0	23	12	5.0	309	322	M20
xii)	280	350	395	284 ^{+1.0} ₋₀	20.0	23	12	5.0	337	322	M20
xiii)	315	400	445	319 ^{+1.0} ₋₀	24.5	23	12	5.0	372	372	M20
xiv)	355	460	505	359 ^{+1.0} ₋₀	24.5	23	16	5.0	406	432	M20
xv)	400	515	565	405 ^{+2.0} ₋₀	24.5	28	16	6.0	441	483	M24
xvi)	450	565	615	455 ^{+2.0} ₋₀	28.0	28	16	6.0	483	533	M24
xvii)	500	620	670	506 ^{+2.0} ₋₀	28.0	28	20	6.0	528	588	M24
xviii)	560	685	740	566 ^{+2.0} ₋₀	32.0	33	20	6.0	577	649	M24
xix)	630	755	810	637 ^{+2.0} ₋₀	32.0	33	20	7.0	636	719	M27

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